INTER-REGIONAL PARTNERSHIP

JOBS/HOUSING OPPORTUNITY ZONE ON-GOING MONITORING PROGRAM METHODOLOGY

SUBMITTED TO

THE INTER-REGIONAL PARTNERSHIP

MARCH 8, 2004

DESIGN, COMMUNITY & ENVIRONMENT

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METHODOLOGY OVERVIEW

The Inter-Regional Partnership (IRP) has engaged DC&E to design an on-going monitoring program for the Jobs/Housing Opportunity Zones (Opportunity Zones). The Opportunity Zones were created as part of the IRP Pilot Project to improve the Jobs/Housing balance between the job-rich Bay Area and the housing-rich Central Valley. The spatial mismatch of housing and jobs may contribute to many undesirable consequences such as long commutes, high housing costs, high infrastructure costs and poor air quality. The monitoring program, administered by IRP staff, will evaluate whether concentrating development in Opportunity Zones is an effective strategy for changing the regional Jobs/Housing imbalance. It will also assess whether improving the balance can mitigate the negative effects that may be associated with the regional Jobs/Housing imbalance.

This technical memorandum includes DC&E's proposed methodology for the on-going monitoring of the Opportunity Zones. Insights into trends and successes will arise from two sets of comparisons: first, by comparing indicator results for each period that data is gathered to previous indicators, and second, by comparing the actual development, commute and air quality results with what was projected to occur in the Demographic and Employment Forecasts published by the IRP in June 2003.

The monitoring program is designed to provide insights over a number of years. Data in the first few years will create data points but will not show trends until the Opportunity Zones are largely built out.

A. Goals for the IRP Jobs/Housing Opportunity Zone Pilot Project

The IRP was established to accomplish four goals, one of which, to achieve a more equitable Jobs/Housing balance between California's Central Valley and Bay Area regions, was operationalized by Assembly Bill 2864. This legislation identified four sub-goals for the IRP Opportunity Zone Pilot Project. In keeping with the intent of the legislative requirements, DC&E recommends adding a fifth goal for the monitoring program.

These five goals are:

1. Encourage economic investment, including job creation near available housing.
2. Encourage housing to be located near major employment centers.
3. Encourage development along corridors served by transit and near transit stations.
4. Encourage more sustainable and effective transportation between jobs and housing centers.
5. Mitigate the negative impacts that may be associated with the regional Jobs/Housing imbalance.

These five goals can be addressed through three "data categories," as described below:

A. The first two of these goals are focused on improving the Jobs/Housing imbalance directly by encouraging either economic development or housing construction in areas where there is a surplus of housing or of jobs, respectively. They will be addressed under the category 'Jobs/Housing Balance'.

B. The second two goals focus on the transportation network as a means of improving some of the impacts thought to be caused by the regional imbalance. These indicators will be assessed under the data category 'Transportation Network'.

C. The final goal, assessing whether or not Opportunity Zone development is mitigating key regional problems, will be addressed under 'Regional Benefits from Opportunity Zone Development'. Some of the data measures for this final goal will also provide indicators of the reasons behind Opportunity Zone successes and failures.

This proposed organization for data categories is outlined in Table 1: IRP Pilot Project Goals and Monitoring Program Categories.

B. Organization of Data

Data to be compiled for each of the categories described above are explained in more detail in this section. The types of data used and information that will be gained under each category is described.

A complete list of the indicators for each category is provided in Table 3 at the end of this memorandum. Detail is provided in Appendix 2.

1. Jobs/Housing Balance – Goals 1 and 2

Jobs/Housing Balance indicators will assess:

- Development in the Opportunity Zones through housing construction and job generation.
- Jobs/Housing match through wage, income and housing price comparisons.
- Jobs/Housing ratio (ideally:1.5 jobs to 1 housing unit as specified in the enabling legislation) by a comparison of households, jobs and travel to work patterns.

2. Transportation Network – Goals 3 and 4

Progress in concentrating development near transit and land use patterns that encourage more sustainable and effective transportation between jobs and housing centers will be evaluated under the rubric of the Transportation Network.

Maps will illustrate the location of new development in relation to transit corridors and stations. Transit route data will be used to analyze topics including:

- Transit density
- Mode split

TABLE 1 **IRP PILOT PROJECT GOALS AND DATA CATEGORIES**

Goal	Data Category
1. Encourage economic investment, including job creation near available housing.	A. Jobs/Housing Balance
2. Encourage housing to be located near major employment centers.	
3. Encourage development along corridors served by transit and near transit stations	B. Transportation Network
4. Encourage more sustainable and effective transportation between jobs and housing centers.	
5. Mitigate the impacts that may be associated with the regional Jobs/Housing imbalance.	C. Regional Benefits from Opportunity Zones

3. Regional Benefits from Opportunity Zone Development – Goal 5

There are several types of regional impacts that will be evaluated to determine whether Opportunity Zone development is mitigating the problems that may be associated with a regional Jobs/Housing imbalance. DC&E recommends measuring:

- Congestion
- Commute times and patterns
- Levels of Service
- Air quality
- Loss or preservation of open space

C. On-Going Monitoring Program and Baselines

DC&E recommends that the IRP collect data every two years.

Indicators will be analyzed with respect to two distinct baselines: the Existing Conditions Baseline and IRP Regional Projections Baseline. These two baselines will help the IRP to determine whether or not they are making progress on their goals.

1. Existing Conditions Baseline

The Existing Conditions baseline will be established with the initial collection and analysis of the indicators recommended in this monitoring program. Data gathered for indicators in 2004 will provide a fixed point from which to measure change, and thus success or failure, for the Opportunity Zones and surrounding areas.

2. IRP Regional Projections Baseline

The IRP Regional Projections Baseline measures whether or not development and commute patterns diverge from projections made at the outset of the IRP Opportunity Zone Pilot Project. Ideally, the IRP would measure against projections that do not include the development of the Opportunity Zones. Since budget and staff restraints preclude this option, the IRP should measure the results from the on-going monitoring program against the Demographic and Employment Forecasts released by the IRP in June 2003, transportation data from the from the Metropolitan Transportation Commission, and San Joaquin and Stanislaus Councils of Government and air quality data from the Air Resources Board. Comparisons should be made for:

- Population
- Housing
- Jobs
- Jobs/Housing ratio
- Housing surpluses or shortfalls
- Vehicle Miles Traveled
- Emissions

D. Data Sources

Potential sources and costs of data collection for the on-going monitoring program are outlined in Appendix 1: Data Sources. The main sources for data include:

- Local Jurisdictions for such information as existing land use and land use designations.
- COGs/MTC for travel and other regional data.
- Census Bureau American Fact Finder for such data as population, income, educational attainment levels.
- Construction Industry Research Board (CIRB) for such data as building permits issued, infrastructure investment dollars.
- California Employment Development Department (EDD) for such information as number of employees, types of employment and wage data.
- California Association of Realtors (CAR) for such data as housing prices.
- Farmland Mapping and Monitoring Program (FMMP) for data on conversion of open space.
- Transit providers for transit network and frequency data.

E. Geographic Scale of Data Collection

Evaluating the progress of the IRP Jobs/Housing Opportunity Zone Pilot Project is not meaningful at just one geographic scale. In order to better understand the impacts of concentrating development in Opportunity Zones, DC&E recommends looking at four different scales:

- Opportunity Zone
- Local Jurisdiction
- Jobs/Housing Analysis Area
- County

1. Opportunity Zone

The Opportunity Zones provide one scale of measurement that gives insight into actual construction, land use patterns and transit service in the Opportunity Zones. The geography of the Opportunity Zones was determined in the selection phase of the Pilot Project.

2. Local Jurisdiction

The second geographic scale is the local jurisdiction, that is, the city, town or community affiliated with the Opportunity Zone. AB 2864 mandates measuring the changes in the Jobs/Housing balance at the jurisdiction scale and so must be included in the evaluation. Looking at the jurisdiction shows the impacts of new job or housing generation and transit improvements locally. This scale is most useful in the Central Valley, where cities are discrete entities. In the Bay Area, jurisdictional boundaries are something of a line in the sand relative to commute patterns, and housing and employment location decisions but will still provide some insights into local housing and employment supplies.

3. Jobs/Housing Analysis Areas

In addition, to the Opportunity Zone and local jurisdiction level the IRP also needs to assess regional impacts from the program.

To measure regional impacts, DC&E proposes to use "Jobs/Housing Analysis Areas" (JHAA). JHAA's are sub regional areas that represent a geographically unified district in which people should reasonably be able to live and work if there were an ideal balance of jobs and housing. These overlapping commute areas extend out from a central job center and to include housing within about a half hour commute or less.

DC&E believes that JHAA's represent an appropriate and manageable geography at which to assess whether or not concentrating development is having a positive affect on air quality, commute times and other regional issues.

There are ten Jobs/Housing Analysis Areas in the five counties: Seven in the Bay Area counties, one in San Joaquin County, and two in Stanislaus County. These are described in Table 2: Jobs/Housing Analysis Areas, and depicted in Figure 1. The areas depicted in the map are approximations of the actual areas which are linked to Transportation Analysis Zones (TAZ) and/or census tracts for data collection purposes. A correlation table showing the Census Tracts/TAZs in each JHAA is provided in Appendix 3.

4. County

DC&E has tried to limit the indicators in which county level data is used so that the Opportunity Zones can be measured at an appropriate scale. However, in order to compare the results of development in the Opportunity Zones with the Demographic and Economic Forecasts mentioned above, IRP will need to collect and monitor data at the same scale as those projections (i.e. the County). Additionally, much of the data needed for these analyses is only attainable at the county scale.

F. Confounding Issues

Determining the impacts of development in the small number of sites designated as Opportunity Zones is complicated by many factors that contribute to the problems that the IRP was created to address. Some of the issues that

contribute to locational decisions and which are not addressed solely by concentrating development include:

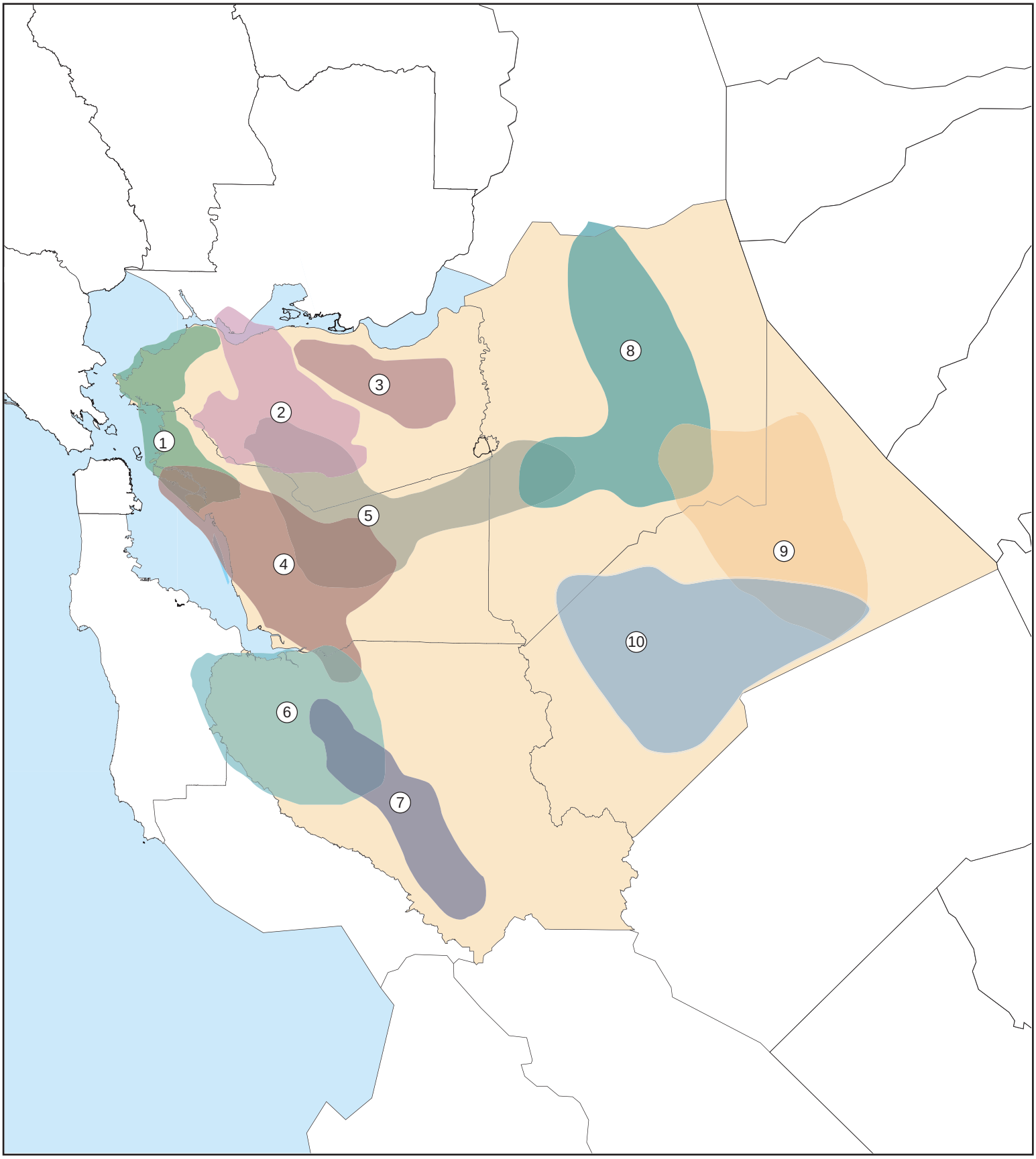
- Two worker households
- Job changeover
- Investments in public transit and roadways
- Quality and investments in public education
- Developer fees

Some appropriate indicators for measuring these issues include:

- Workers per household
- Job tenure
- Investment dollars for infrastructure investment
- Spending per pupil
- Statewide ranking of schools
- Developer fee schedules

TABLE 2 **Jobs/Housing Analysis Areas**

Number	Jobs/Housing Analysis Area Name	Description
1	Western Contra Costa/Northern Alameda	Crockett through Oakland and Alameda along Interstate 80, along the east shore of San Francisco Bay.
2	Central Contra Costa	Includes central Contra Costa County, with Walnut Creek, Concord and Pleasant Hill at the core. Extends from Danville and Blackhawk along Highway 680 north through Martinez. Extends along the Highway 24 corridor to include Lafayette, Moraga and Orinda. Also includes Benicia.
3	Eastern Contra Costa	Extends along the Highway 4 corridor from Martinez in the west through Brentwood in the east.
4	Central/Southern Alameda	Extends along the east shore of San Francisco Bay from Oakland south along the Highway 880 corridor through Milpitas. Includes parts of the Highway 580 and 680 corridors extending through Dublin and Pleasanton.
5	Tri-Valley	Includes the Tri-Valley area from Alamo along Highway 680 to Pleasanton. Includes Livermore along Highway 580 and Tracy along 205.
6	Silicon Valley	Extends from the northern borders of Santa Clara County, including Palo Alto and Milpitas, through San Jose, including Coyote Valley.
7	Southern Santa Clara County	Extends from Gilroy in the south along the Highway 101 corridor north to downtown San Jose.
8	I-5 Corridor San Joaquin County	Extends north from Stockton between the Highway 5 and Highway 99 corridors to Lodi and south to Ripon. Tracy is included to the west and Escalon to east.
9	I-99 South, Stanislaus County	Extends north from Modesto along Highway 99 to Lathrop and south to Turlock. To the east out to Hickman and west out to Grayson.
10	Patterson	Extends east from I-5 through Patterson and south to Gustine, west to Turlock, and north to Grayson.



1 Western Contra Costa/ Northern Alameda
2 Central Contra Costa
3 Eastern Contra Costa
4 Central/Southern Alameda
5 Tri-Valley
6 Silicon Valley
7 Southern Santa Clara County
8 I-5 Corridor San Joaquin County
9 I-99 South Stanislaus County
10 Patterson

FIGURE 1

JOBS/HOUSING ANALYSIS AREAS

IRP JOBS/HOUSING OPPORTUNITY ZONE ON-GOING MONITORING PROGRAM
METHODOLOGY

TABLE 3 **SUMMARY LIST OF ON-GOING MONITORING PROGRAM INDICATORS**

Indicator	Description	Definition	Data Source	Geographic Scale
Jobs and Housing Balance - Goals 1 and 2 Indicators				
Indicator JH.1:	Population	Number of residents in defined geographic area.	Population	Opportunity Zone
Indicator JH.2:	Number of Households	A household includes all the persons who occupy a dwelling unit.	Households	Opportunity Zone
Indicator JH.3:	Jobs	Total number of Jobs	Jobs	Opportunity Zone
Indicator JH.4:	Permitted Residential Development	The number of residential building permits that have been issued in the Opportunity Zone.	Number of Permits with total dwelling units	Opportunity Zone
Indicator JH.5:	Built Dwelling Units	A dwelling unit can be a house, apartment or other group of rooms, or a single room, when occupied or intended for occupancy as separate living quarters.	Dwelling Units	Opportunity Zone
Indicator JH.6:	Permitted Commercial/Industrial Development	The number of commercial or industrial building permits that have been issued in the Opportunity Zone since its designation and then during each measuring period thereafter.	Number of Permits with Commercial/Industrial Square Footage	Opportunity Zone
Indicator JH.7:	Built Commercial/Industrial Development	Total square footage of existing commercial development.	Commercial/Industrial Square Footage	Opportunity Zone
Indicator JH.8:	Development Progress in Opportunity Zone	Existing Dwelling Units/Potential Dwelling Units: Existing square footage divided by potential commercial square footage	Dwelling Units built Dwelling Units Allowed under Zoning Commercial/Industrial Square Footage Existing Commercial/Industrial Square Footage Allowed under Zoning	Opportunity Zone
Indicator JH.9:	Dwelling Density	Dwelling Units per net acre of land designated for residential development.	Dwelling Units Residentially Zoned Acres of Site	Opportunity Zone

TABLE 3 **SUMMARY LIST OF ON-GOING MONITORING PROGRAM INDICATORS (CONT.)**

Indicator	Description	Definition	Data Source	Geographic Scale
Jobs and Housing Balance - Goals 1 and 2 Indicators (Continued)				
Indicator JH.10:	Employee Density	Employees per net acre of existing non-residential/non agricultural land use.	Employees Commercially/Industrially Zoned Acres of site	Opportunity Zone
Indicator JH.11:	Availability of Affordable Housing	The percentage of the total housing stock that is affordable based on the U.S. Department of Housing and Urban Development definition (i.e. an affordable housing unit costs 30 percent of the area median annual income.)	Dwelling Units by Price Median Monthly Household Income	Opportunity Zone/Jurisdiction
Indicator JH.12:	Median Housing Price	Median price for a range of housing types	Median Price Single Family Detached Median Rent	Opportunity Zone/Jurisdiction
Indicator JH.13:	Jobs to Housing Ratio	Ratio of Jobs to Households	Employees Households	Opportunity Zone/Jurisdiction/ JHAA/County
Indicator JH.14:	Percent of People who Work and Live in Same Jurisdiction	Shows how many people in the County live and work in the same place or county.	Place of Work (County and Place Level)	County
Indicator JH.15:	Median Wage to Median Per Capita Income Comparison	The comparison of the median wage in the opportunity zone to per capita income in the surrounding areas.	Annual Median Wage Annual Median Per Capita Income	Opportunity Zone/Jurisdiction/ JHAA/County
Indicator JH.16:	Median Monthly Housing Cost (Own) to Median Monthly Wage Comparison	The ratio of monthly housing costs to monthly salaries in the area.	Monthly Median Housing Costs (Owner and/or Renter) Monthly Median Wage	Opportunity Zone/Jurisdiction/ JHAA/County

TABLE 3 **SUMMARY LIST OF ON-GOING MONITORING PROGRAM INDICATORS (CONT.)**

Indicator	Description	Definition	Data Source	Geographic Scale
Transportation Network - Goals 3 and 4 Indicators				
Indicator T.1:	Transit Density	Miles of transit routes within the Opportunity Zone plus a one mile buffer multiplied by number of transit vehicles traveling those routes each day divided by total acres.	Miles of Transit Routes Number of Vehicles Per Day Total Acres	Opportunity Zone/Jurisdiction
Indicator T.2:	Mode Split	The number of trips from the study area that are taken by automobile, transit, walk or bicycle.	Number of Car, transit, bicycle and Walk trips	Opportunity Zone/Jurisdiction/ JHAA
Indicator T.3	Average Walking Distance from Residential uses to transit (Optional)	Percent of units within 1/4-mile, 1/2-mile, 1-mile of transit stops	Location of Transit Dwelling Units by Location Dwelling Units in study area	Opportunity Zone
Indicator T.4:	Average Walking Distance from Residential uses to transit (Optional)	Percent of units within 1/4-mile, 1/2-mile, 1-mile of commercial	Land Use Designations by Location and Acreage Total Residentially developed acres	Opportunity Zone
Regional Benefits from Opportunity Zone Development - Goal 5				
Indicator A.1:	Vehicle Emissions	Pounds per year per capita of Carbon Monixide. Hydrocarbons, Oxide of Sulphur, Oxides of Nitrogen, Particulate matter and Carbon Dioxide.	Vehicle Miles Traveled	Opportunity Zone/Jurisdiction/ JHAA
Indicator C.1:	Vehicle Miles Traveled	Total number of miles traveled by area residents per day	Vehicle Miles Traveled	Opportunity Zone/Jurisdiction/ JHAA/County
Indicator C.2:	Vehicle Trips	Total number of vehicle trips from analysis area per day.	Vehicle Trips	Opportunity Zone/Jurisdiction/ JHAA/County

TABLE 3 **SUMMARY LIST OF ON-GOING MONITORING PROGRAM INDICATORS (CONT.)**

Indicator	Description	Definition	Data Source	Geographic Scale
Regional Benefits from Opportunity Zone Development - Goal 5 (Cont.)				
Indicator OS.1:	Open Space Preservation	Percent of Study Area Dedicated to Open Space/Agricultural Land	Acres of Land Designated as Open Space or Agricultural Total Acres	Opportunity Zone/Jurisdiction
Indicator OS.2:	Urbanization of Land	The total acres and percent of total land conversion of agricultural or open space land to urbanized land.	Acres of Urbanized Land Total Acres of Land	Jurisdiction/County
Indicator C.3:	Level of Service Highways	Level of service is defined in terms of delay, which is a measure of discomfort, frustration, fuel consumption and lost travel time.	Caltrans Level of Service Data	County

APPENDIX 1

DATA SOURCES

Following is a compilation of data sources with a summary of the types of data each provides, data collection methods and any associated costs. Table A1-1 provides a list of all the data sets needed to implement the monitoring program along with the probable source for that data and the indicators to which each data set applies.

A. Local Jurisdictions

Local jurisdictions are the best source for data about the development characteristics and the most recent population and employment data. Some jurisdictions have extensive electronic data which is ideal for this project though much of the necessary data will need to be collected via phone requests and surveys from the local Planning Department. Potential data sets include:

- Existing land use
- Land use designations
- Permitted Development
- Population
- Employment

B. COGs/MTC

ABAG, StanCog,, SJCOG and MTC have a considerable amount of the data necessary to implement this monitoring program. This data includes: *Demographic and Economic Forecasts,* ABAG June 2003. Some Existing Land Use Data from the Local Development Policy Survey Transportation Data in the Regional Transportation Plan and used by the transportation departments for other Transportation planning exercises including:

- VMT
- Vehicle Trips
- Population
- Some transit information.

C. Census Bureau American Fact Finder

1. Decennial Census

The results from Census 2000 are available in a number of data products that can be found on the Data Sets page. **Summary File 1 (SF 1)** and **Summary File 3 (SF 3)** provide the information necessary for the IRP. The list of data sets provided in the American Community Survey section will be the most relavent for IRP purposes.

2. American Community Survey

The American Community Survey (ACS) is a new annual nationwide survey designed to collect information from U.S. households similar to what was collected on the Census 2000 long form. The ACS collects and produces population and housing information every year instead of every ten years. The ACS began in 1996 and has expanded each subsequent year. Data currently are available at the County level for all five IRP counties beginning in 2000.

Relavent data sets for counties include:

- Population
- Households
- Average Household Size
- Residence a Year Ago
- Place of Work
- Means of Transportation
- Travel Time to Work
- Time Leaving Home to go to Work
- Private Vehicle Occupancy
- Household income
- Housing Units, Tenure and Occupancy
- Educational Attainment

D. Construction Industry Research Board (CIRB)

1. Building Permits

Residential and private nonresidential building construction data are reported in CIRB's 18-page monthly *California Construction Review*, and data printouts. CIRB data are grouped by county, region, city, metropolitan area, by year or month and by type of building (single- and multi-family housing, commercial, industrial, and other building categories). California building-permit data are collected and updated monthly by CIRB from information obtained from the state's more than 530 city and county building departments.

Single Orders minimum charge is $9.00 per mailing or fax or $8.00 per county for the first three counties, plus $4.00 per county thereafter. Annual subscriptions: $72.00 per county for the first three counties; $38.00 per county thereafter.

2. Housing Prices

CIRB also publishes a report for the 39 largest California counties that includes 20 years of data from 1982 to 2001 covering the mean and median price and size, distribution of sales by price range, form of ownership, type of structure and number of bedrooms. Report Charge: $178.00.

Contact Information:
http://www.cirbdata.com
2511 Empire Avenue
Burbank, CA 91504
Phone: (818) 841-8210
Fax: (818) 841-9063
Email: cirb@magi.net

E. California Employment Development Department EDD

EDD's Labor Market Information Division (LMID) regularly collects, analyzes, and publishes information about California's labor markets. In addition to employment and unemployment data, LMID provides information on industries, occupations, wages and labor market trends. Most of these data are available for the state and counties. These data are published on the LMID Web site. Upon request, LMID provides custom data tabulations of:

- Employment
- Payroll
- Number of employers by ZIP code, county, state and industry.

The source for these custom data tabulations is the Quarterly Census of Employment and Wage (QCEW) program in which EDD collects quarterly information from employers on their employment, wages, and taxable contributions. Historical data are available by quarter from 1991. All

tabulations are screened for confidentiality as required by law. T Data are provided either in print or electronically on CD-ROM or via e-mail. There will be a charge to provide a custom tabulation.

LMID Website: http://www.calmis.ca.gov/default.htm
QCEW available on line: http://www.calmis.ca.gov/file/es202/cew-select.htm

Employment Development Department
Labor Market Information Division
7000 Franklin Blvd, Building 1100
Sacramento, CA 95823-1859
E-mail: lmid.info@edd.ca.gov
Non-confidential Data
(916) 262-2162: ask to speak to the "AdHoc Team".
Confidential Data:
(916) 262-2162

F. California Association of Realtors (CAR)

CAR sells County Economic Profiles which contain a compilation of ethnic, demographic, and financial data designed to inform REALTORS and homebuyers of the latest market trends in their counties but could be very useful for the IRP. Profiles are based on data from the US Census Bureau, Employment Development Department, the California Department of Finance, Federal Home Loan Mortgage Corporation, Construction Industry Research Board, the State Board of Equalization, TransAmerica Intellitech and the California Association of REALTORS. Each Profile contains charts covering:

- Home resale activity and consumer confidence
- Median home prices and mortgage rates

- Housing affordability index
- Population and migration trends
- Retail sales
- Foreclosure rates
- Alameda, Contra Costa, San Joaquin, Santa Clara, and Stanislaus counties are all available.

Annual Subscription Rate is $190 per county; 20% off for three or more counties! One-time offerings are $35 per county. More Information is available from :
Website: www.car.org
County Economic Program Manager at 213-739-8217
Carenb@car.org

G. Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources. Transition from agricultural land to urbanized land is tracked. The maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance.

GIS Data is available on-line by county at:
http://www.consrv.ca.gov/DLRP/fmmp/index.htm

H. Transit Operators

Transit operators may be the only source for route mile and vehicles frequency (headways) data. Such data is only available through phone requests.

TABLE A1 **DATA REQUIREMENTS BY SOURCE AND INDICATOR**

Source	Data Set	Opportunity Zone	Jurisdiction	JHAA	County
CAR/Census	Median Housing Price (Single Family Detached Purchase)	JH.12	JH.12	JH.12	JH.12
CAR/Census	Median Rent	JH.12	JH.12	JH.12	JH.12
CAR/Census	Median Monthly Housing Cost	JH.11, JH.16	JH.11, JH.16	JH.16	JH.16
CAR/CIRB	Dwelling Units by Price	JH.11	JH.11		
Census	People who live and work in same jurisdiction		JH.14		JH.14
Census/Local Jurisdiction	Population	JH.1	JH.1	JH.1	JH.1
Census/Local Jurisdiction	Median Household Income	JH.11, JH.15	JH.11, JH.15	JH.15	JH.15
Census/Local Jurisdiction	Median Per Capita Income	JH.15	JH.15	JH.15	JH.15
Census/Local Jurisdiction/COG/MTC	Households	JH.2, JH.13	JH.2, JH.13	JH.2, JH.13	JH.2, JH.13
CIRB	Residential Building Permits	JH.4			
CIRB	Commercial Building Permits	JH.6			
COG/MTC	Level of Service (freeways)				C.3
COG/MTC	Mode Split	T.2	T.2	T.2	T.2
COG/MTC	Vehicle Miles Traveled	A.1, C.1	A.1, C.1	A.1, C.1	A.1, C.1
COG/MTC	Vehicle Trips	C.2	C.2	C.2	C.2
EDD	Number of Jobs/Employees	JH.3, JH.10, JH.13	JH.3, JH 13	JH.3, JH 13	JH.3, JH.13

TABLE A1 **DATA REQUIREMENTS BY SOURCE AND INDICATOR (CONT.)**

Source	Data Set	Opportunity Zone	Jurisdiction	JHAA	County
FMMP	Acres Urbanized Land		OS.2		OS.2
Local Jurisdiction	Total Acres in Study Area	T.1, T.3, T.4	OS.1, OS.2		OS.2
Local Jurisdiction	Dwelling Units by Type (Existing Land Use)	JH.5, JH.9			
Local Jurisdiction	Commercial Square Footage (Existing Land Use)	JH.7			
Local Jurisdiction	Dwelling Units by Location (Existing Land Use) (Optional)	T.3, T.4			
Local Jurisdiction	Commercial Land Use Designation by Location	T.4			
Local Jurisdiction	Public Land Use Designation by Location	T.4			
Local Jurisdiction	Land Use Designations by Acres	JH.9, JH.10	OS.1		
Local Jurisdiction	Open Space Land Use Designation by acres		OS.1		
Local Jurisdiction	FAR and Dwelling Units/acre (zoning)	JH.8			
Transit Operator	Transit Routes (GIS) by length	T.1			
Transit Operator	Transit Stops	T.1			
Transit Operator	Headways	T.1			

APPENDIX 2

INDICATOR DETAIL

The indicators listed in Table 3 above are described here in greater detail to provide a better understanding of the data collection method and the information that the IRP will gain from each measurement tool.

A. Jobs and Housing Balance - Goals 1 and 2 Indicators (see Table 3)

Indicator JH.1:	**Population**
Definition:	Number of residents in Opportunity Zone.
Formula:	Population Growth: $\Sigma Population_{b+1} - \Sigma Population_{b}$
	Percent Change: $(\Sigma Population_{b+1} / \Sigma Population_{b} * 100) - 100$
Variables:	$\Sigma Population_{b}$ = Sum of Population for the base year
	$\Sigma Population_{b+1}$ = Sum of Population for the base year plus one monitoring period
Data Source:	Local Jurisdiction Population Estimate
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	Census or Local Government Phone Survey
Analysis Reveals:	Growth in population in the study area since last measurement. Also an indication of how many individuals will be seeking housing and or jobs. Percent change is a measure of how significant the change is relative to total population.

Indicator JH.2:	**Number of Households**

Definition:	Number of Households defined as all persons who occupy a dwelling unit. Occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements.
Formula:	Household Growth: $\Sigma Household_{b+1} - \Sigma Household_{b}$ Percent Change: $(\Sigma Household_{b+1} / \Sigma Household_{b} * 100) - 100$
Variables:	$\Sigma Household_{b}$ = Total Households for the base year $\Sigma Households_{b+1}$ = Total Households for the base year plus one monitoring period
Data Source:	Housing Element; Census Tract Data; Local planning department
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	Census data
Analysis Reveals:	Growth in number of households in study area since last measurement period and is an indicator of how many household units will be seeking individual dwelling units in the areas around the opportunity zones. Percent change is a measure of how significant the change is relative to total number of households.

Indicator JH.3:	**Jobs**
Definition:	Total number of jobs.

Formula:	Job Growth: $\Sigma Jobs_{b+1} - \Sigma Jobs_{b}$ Percent Change: $(\Sigma Jobs_{b+1} / \Sigma Jobs_{b} * 100) - 100$
Variables:	$\Sigma Jobs_{b}$ = Total Jobs for the base year $\Sigma Jobs_{b+1}$ = Total Jobs for the base year plus one monitoring period
Data Source;	California Employment Development Department (EDD) (See appendix)
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	EDD provides complete tabulations by zip code (see appendix)
Analysis Reveals:	Growth in number of jobs in study area since last measurement period and is an indicator of how many jobs are available in the areas around the opportunity zones. Percent change is a measure of how significant the change is relative to total number of jobs.

Indicator JH.4:	**Permitted Residential Development**
Definition:	The number of residential building permits that have been issued in the Opportunity Zone since its designation and then in each measuring period thereafter.
Formula:	$\Sigma Permits_{R}$
Variable Definitions:	$Permits_{R}$ = Residential Building Permits

Data Source:	Local Planning Department or Construction Industry Research Board (CIRB), which tracks all construction permits on a monthly basis.
Geographic Scale:	Opportunity Zone
Data Collection Method:	Purchase from CIRB would be the easiest collection method though there is a fee. Existing land use GIS layer or phone survey with planning department is another option.
Analysis Reveals:	This measure is required by AB 2864 and shows how much development is underway in the Opportunity Zones.

Indicator JH.5: **Built Dwelling Units**

Definition:	A dwelling unit can be a house, apartment or other group of rooms, or a single, when any of these is occupied or intended for occupancy as separate living quarters (i.e. when occupants do not live and eat with any other persons in the structure and there is direct access from the outside or through a common hall).
Formula:	$\sum DU_{sf} + \sum DU_{m\text{-}f} + \sum DU_{MH} + \sum DU_{MF\ 2\text{-}} + \sum DU_{MF6+}$
Definitions:	DU_{SF} = Single family dwelling units DU_{MH} = Mobile home dwelling units $DU_{MF\ 2\text{-}5}$ = Multi-family dwelling units with two to five units. $DU_{MF\ 6+}$ = Multi-family dwelling units with six or more units. DU_{GQ} = Group quarter dwelling units.

Data Source:	Existing Land use from the Local Planning Department, Housing Element or Census Bureau counts for dwelling units.
Geographic Scale:	Opportunity Zone
Data Collection Method:	Phone Survey for local data; 2002 County Wide Estimates are available from the US Census at: http://eire.census.gov/popest/data/household.php
Analysis Reveals:	Change in number of housing units.

Indicator JH.6: Permitted Commercial / Industrial Development

Definition:	The number of commercial or industrial building permits that have been issued in the Opportunity Zone since its designation and then during each measuring period thereafter.
Formula:	$\sum C_{bp} + \sum I_{bp}$
Variable Definitions:	$Permits_C$ = Commercial Building Permits $Permits_I$ = Industrial Building Permits
Data Source:	Local planning department/CIRB (See appendix)
Geographic Scale:	Opportunity Zone
Data Collection Method:	Purchase from CIRB would be the easiest collection method though there is a fee. Existing land use GIS layer or phone survey with planning department is another option.
Analysis Reveals:	This measure is required by AB 2864 and shows how much commercial and

	industrial development is underway in the Opportunity Zones.
Indicator JH.7:	**Built Commercial / Industrial Development**
Definition:	Total square footage of existing commercial development.
Formula:	Σ Square Feet Commercial
Data Source:	Existing Land Use square footage commercial
Geographic Scale:	Opportunity Zone
Data Collection Method:	Existing land use GIS layer or phone survey with planning department.
Analysis Reveals:	Shows total amount of commercial space.

Indicator JH.8:	**Development Progress in Opportunity Zone**
Definition:	Percent of residential, commercial, industrial and other potential development, as determined by local land use laws, that has been completed in the Opportunity Zone.
Formula:	$\sum DU_{built}/\sum DU_{potential}$ $\sum C_{built}/\sum C_{potential}$ $\sum I_{built}/\sum I_{potential}$
Variables:	DU_{built} = Built Dwelling Units $DU_{potential}$ = Potential Dwelling Units (calculated: Total Acres Residential X allowed Dwelling Units per Acre) C_{built} = Built Commercial Square Footage $C_{potential}$ = Potential Commercial Square Footage (calculated: Total Acres Commercial X allowed Floor Area Ratio) I_{built} = Built Industrial Square Footage $I_{potential}$ = Potential Industrial Square Footage (calculated: Total Acres Industrial X allowed Floor Area Ratio)
Data Source:	Land Use Designations, Zoning and Existing Land Use
Geographic Scale:	Opportunity Zone
Data Collection Method:	Phone survey with local jurisdiction
Analysis Reveals:	The extent to which the Opportunity Zone has been constructed.

Indicator JH.9:	**Dwelling Density**
Definition:	Dwelling Units per net acre of land designated for residential development.
Formula:	Σ DU/Σ ARES
Definitions:	DU = Existing Dwelling Units ARES = Total Acres of Land with a Residential Land Use Designation
Data Source:	Existing Land Use dwelling unit counts and dwelling unit structure type.
Geographic Scale:	Opportunity Zone
Analysis Reveals:	This indicator shows the 'dwelling units per acre' and provides information about the ability of the development to support transit.

Indicator JH.10:	**Employee Density**
Definition:	Employees per net acre of existing non-residential/non agricultural land use.
Formula:	Σ Employees/Σ acres of non residential/non agricultural land
Data Source:	Existing land use data/California Employment Development Department (EDD)
Geographic Scale:	Opportunity Zone
Data Collection Method:	Phone survey with local jurisdiction, EDD data request
Analysis Reveals:	This indicator evaluates how well the Opportunity Zone is achieving the density

goals set out in the general or specific plan for the area.

Indicator JH.11:	**Availability of Affordable Housing**
Definition:	The percentage of the total housing stock that is affordable based on the U.S. Department of Housing and Urban Development definition (i.e. an affordable housing unit costs 30 percent of the area median annual income.)
Formula:	$(\sum DU_{AFF}/\sum DU_{TOTAL}) * 100$
Definitions:	DU_{AFF} = Affordable dwelling units with price less than or equal to 30% of median family income. (Calculated: $DU_{AFF} \leq 0.3$ * Median Monthly Household Income)
	DU_{TOTAL} = Total Dwelling Units
Data Source:	Redevelopment Agency; California Association of Realtors
Geographic Scale:	Opportunity Zone/Jurisdiction
Data Collection Method:	
Analysis Reveals:	This shows what percentage of the local housing stock is affordable to the local area residents.

Indicator JH.12:	**Median Housing Price**
Definition:	Median price for a range of housing types
Formula:	Median Price Single Family Detached
	Median Rent

Data Source:	CIRB, Census American Community Survey, California Association of Realtors, or
Geographic Scale:	Opportunity Zone/Jurisdiction
Analysis Reveals:	This indicator shows the cost of housing for sale and rent in the study area.

Indicator JH.13:	**Jobs to Housing Balance**
Definition:	Ratio of employees to Households
Formula:	Σ Jobs/Σ Households
Data Source:	California Employment Development Department (EDD)/Existing Land Use Data/Dwelling Unit Count by type.
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	EDD provides complete tabulations by zip code and Existing land use data from the local jurisdiction, preferably in GIS format, phone surveys may be necessary. (see appendix)
Analysis Reveals:	This ratio is mandated by AB 2864 to assess whether or not there is a balance between jobs and housing in a given jurisdiction. The legislation indicates that a ratio of 1.5 jobs to 1 housing unit is ideal though there is some discussion about that number. A better ratio may be equal to the median workers per household.

Indicator JH.14:	**Percent of People who Work and Live in Same Jurisdiction**
Definition:	Percent of People who Work and Live in Same Jurisdiction
Formula:	$\sum E_{lw}/\sum E_{total}$ *100
Variable Definitions:	E_{lw} = Number of employees that live and work in the same jurisdiction
	E_{total} = Total employees in jurisdiction
Data Source:	Census American Community Survey/Travel survey data/Major employer surveys/Chambers of Commerce
Geographic Scale:	Jurisdiction, County
Data Collection Method:	Census
Analysis Reveals:	This measure provides insight into likely home-to-workplace commute patterns: a measure of how well local housing supply is meeting the needs of local employees.

Indicator JH.15:	**Median Wage to Median Per Capita Income**
Definition:	A comparison of the median wages and per capita income in the study area.
Formula:	
Housing Rich OZs:	W_{OZ}/ HHI_J
	W_{OZ}/ HHI_{JHAA}
	W_{OZ}/ HHI_C
Jobs-Rich Ozs:	HHI_{OZ}/ W_J
	HHI_{OZ}/ W_{JHAA}

	HHI_{OZ}/ W_C
Variable Definitions:	W_{OZ} = Median annual wage in Opportunity Zone
	W_J = Median annual wage in Jurisdiction
	W_{JHAA} = Median annual wage in JHAA
	W_C = Median annual wage in County
	HHI_{OZ} = Median Annual Household Income for Opportunity Zone
	HHI_J = Median Annual Household Income for Jurisdiction
	HHI_{JHAA} = Median Annual Household Income for JHAA
	HHI_C = Median Annual Household Income for County
Data Source:	Census American Community Survey and EDD
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	Website
Analysis Reveals:	The match between wages, and thus jobs, and per capita income. Ideally, the ratio of wages to income will be one-to-one. A ratio greater than one-to-one (e.g. 2 to 1)indicates that area employees are earning more than the area residents and that residents may be commuting out to lower wage jobs and workers are commuting in from more affluent residential areas. A ratio of less than one-to-one (1 to 2) indicates that resident income is higher than area wages and that residents may be

	commuting out to higher paying jobs and workers are commuting in from lower income areas.
Indicator JH.16:	**Housing Cost to Wage Comparison**
Definition:	Ratio of monthly median housing cost to monthly median household income.
Formula:	HC/HH_{Inc}
Definitions:	HC = Monthly Median Cost for Housing
	HH_{Inc} = Monthly Median Household Income
Data Source:	ACS Census data has this information at the County wide level updated every two years. CAR has median housing costs on a quarterly basis.
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	Website or Order from CAR
Analysis Reveals:	The affordability of housing relative to wages earned in the area. Ideally, this ratio would equal 0.3 to achieve HUD's definition of affordability (i.e. housing costs should equal 30% of income).

Spatial Data - Maps

Map 1: Jobs/Housing Location

The jobs and housing location maps will have two layers: The first will be the location of employment and the second will show the location of housing in the five county region. IRP staff should create a base map with the location of jobs and housing in 2000 at the inception of the Opportunity

Zone Pilot Project and then add new layers showing new housing and jobs development for each subsequent measurement period.

B. Transportation Network - Goals 3 and 4 Indicators (See Table 4)

Indicator T.1:	**Transit Density**
Definition:	Miles of transit routes multiplied by number of transit vehicles traveling those routes each day divided by total acres.
Formula:	$\sum (V_t * L_t) / A$
Definitions:	V_t = the number of vehicles for transit route T L_t = the length in feet of the part of the transit route T that is inside the study area or within a one mile radius. A = the area in acres of the study area plus the number of acres within a one mile.
Data Source:	Transit Providers for number of route miles in study area and daily number of vehicles on those routes
Geographic Scale:	Opportunity Zone
Data Collection Method:	Phone request to transit agencies.
Analysis Reveals:	Measure of the percent of the study area served by transit.

Indicator T.2:	**Mode Split**
Definition:	The number of trips from the study area that are taken by automobile, transit, walk or bicycle.
Formula:	$\text{Car Trips}_{\text{Daily}}/\text{Total Trips}_{\text{Daily}}$
	$\text{Transit Trips}_{\text{Daily}}/\text{Total Trips}_{\text{Daily}}$
	$\text{Bicycle Trips}_{\text{Daily}}/\text{Total Trips}_{\text{Daily}}$
	$\text{Walking Trips}_{\text{Daily}}/\text{Total Trips}_{\text{Daily}}$

Data Source:	Regional Transportation Plan (COG or MTC)
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	Determining mode split requires a travel demand modeling program such as Baycast – 90 or travel surveys in the study area. Both measuring techniques require extensive staff time and expertise. Unless MTC, START, or
Analysis Reveals:	Measuring mode split over time shows whether or not development policies and transportation investments are having an impact on the choices people make about travel mode.

Indicator T.3	**Average Walking Distance from Residential uses to transit (Optional)**
Definition:	Percent of units within 1/4-mile, 1/2-mile, 1-mile of transit stops
Formula:	$\sum DU_{1/4} / \sum DU_{Total}$ $\sum DU_{1/2} / \sum DU_{Total}$ $\sum DU_{1} / \sum DU_{Total}$
Variable Definitions:	$DU_{1/4}$ = Dwelling Units with in ¼ mile of transit stop $DU_{1/2}$ = Dwelling Units with in ½ mile of transit stop DU_{1} = Dwelling Units with in 1 mile of transit stop DU_{Total} = Total Dwelling Units in study area

Data Source:	Existing land use data (dwelling units) from local jurisdiction and map of transit stops from transit providers.
Geographic Scale:	Opportunity Zone
Data Collection Method:	Phone request to transit agencies.
Analysis Reveals:	Accessibility of transit for walking trips.

Indicator T.4:	**Average Distance to Amenities (Optional)**
Definition:	Percent of units within 1/4-mile, 1/2-mile, 1-mile of commercial
Formula:	$\sum A_{res1/4} / S A_{res} *100$ $\sum A_{res1/2} / S A_{res} *100$ $\sum A_{res1} / S A_{res} *100$
Variable Definitions:	$A_{res1/4}$ = Acres of land developed with residential within ¼ mile of commercially developed land. $A_{res1/2}$ = Acres of land developed with residential between ¼ and ½ mile of land developed for commercial. A_{res1} = Acres of land developed with residential between ½ and 1 mile of land developed for commercial. A_{res} = Total Residentially developed acres
Data Source:	Existing Land Use Data from Local Planning Department
Geographic Scale:	Opportunity Zone

Data Collection Method:	Existing residential and commercial land uses are mapped using
Analysis Reveals:	Approximates how accessible commercial amenities are to residential development. Higher percentages of units within a ¼, ½ and 1 mile of amenities indicates higher potential for walking and bicycle trips.

Spatial Data - Maps

Transportation Map 1: Regional Transit Routes, Residential and Employment Centers

The Transit Routes, Residential and Employment Centers location maps will have three layers: The first will be the location of regional transit routes with major transit stops throughout the five county region. Residential and employment centers will each be shown on separate layers. Opportunity Zone location will be highlighted on the maps. IRP staff should create a base map with the location of jobs and housing relative to transit in 2000 at the inception of the Opportunity Zone Pilot Project and then add new layers showing development around transit stops for each subsequent measurement period.

Transportation Map 2: Road and Freeway Network

This map will show the spatial extent of major roads and freeways in and near the chosen geographic scale. Freeway interchanges will be noted.

C. Regional Benefits from Opportunity Zone Development (See Table 5)

1. Air Quality

Indicator A.1:	**Vehicle Emissions**
Definition:	Pounds per year per capita of Carbon Monixide. Hydrocarbons, Oxide of Sulphur, Oxides of Nitrogen, Particulate matter and Carbon Dioxide. for the average passenger car Source: U.S. Environmental Protection Agency National Vehicle and Fuel Emission Laboratory, April 1997.
Formula:	Carbon Monixide = $VMT_{per\ capita}$ * COCoeff * (365/453.6) Hydrocarbons= $VMT_{per\ capita}$ * HCCoeff * (365/453.6) Oxide of Sulphur= $VMT_{per\ capita}$ * SOXCoeff * (365/453.6) Oxides of Nitrogen= $VMT_{per\ capita}$ * NOXCoeff * (365/453.6) Carbon Dioxide= $VMT_{per\ capita}$ * CO2Coeff * (365/453.6)
Variables:	$VMT_{per\ capita}$ = Vehicle Miles Traveled Per Person Per Year COCoeff = Carbon Monoxide Coefficient (22 grams per mile) HCCoeff =Hydrocarbon Coefficient (2.9 grams per mile)

SOXCoeff = Oxides of Sulphur Coefficient (1.5 grams per mile)

NOXCoeff = Oxides of Nitrogen Coefficient (1.5 grams per mile)

CO2Coeff = Carbon Dioxide Coefficient (0.8 pounds per mile)

Calculation:	DC&E recommends using the EMFAC
Data Source:	
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA, County
Data Collection Method:	With Urbemis 2002 data collected for other aspects of the monitoring program can be used as inputs.
Analysis Reveals:	A decline in vehicle emissions may be an indicator that the spatial balance between jobs and housing is improved, reducing the need to travel long distances between trip origins and destinations.

2. Congestion

Indicator C.1:	**Vehicle Miles Traveled**
Definition:	Total number of vehicle miles traveled (VMT) by area residents per day
Calculation:	DC&E recommends using data from the San Joaquing and Stanislaus COG and Metropolitan Transportation Commission to determine VMT.
Data Source:	COG/MTC

Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	Internal collection
Analysis Reveals:	A decline in the vehicle miles traveled indicates that people are driving shorter distances. This may be caused by moving jobs and housing closer together but there are a number of other contributing factors, including , other land use characteristics, vehicle costs (e.g. gas or fees), transit costs, or unemployment.

Indicator C.2:	**Vehicle Trips**
Definition:	Total number of vehicle trips (VT) from analysis area per day.
Calculation:	DC&E recommends using data from the San Joaquin and Stanislaus COG and Metropolitan Transportation Commission to determine VT.
Data Source:	COGs/MTC
Geographic Scale:	Opportunity Zone/Jurisdiction/JHAA/County
Data Collection Method:	With Urbemis 2002 data collected for other aspects of the monitoring program can be used as inputs.
Analysis Reveals:	A decline in the vehicle trips indicates that people are taking fewer trips per day. This may be caused by switching modes from car to transit, bicycling or walking or a people consolidating trips such as driving once to go to work and grocery shop. There are a number of other contributing

	factors that it may indicate as well such as: vehicle costs (e.g. gas or fees), transit costs, or unemployment.

Indicator C.3:	**Level of Service Highways**
Definition:	Level of service is defined in terms of delay, which is a measure of discomfort, frustration, fuel consumption and lost travel time.
Calculation:	Level of Service is measured in terms of Letter Grades from A (least delay) to F (worst delay).
Data Source:	Caltrans
Geographic Scale:	County
Data Collection Method:	Phone surveys to Caltrans.
Analysis Reveals:	An improvement in level of service could reflect infrastructure and roadway capacity improvements and/or improved jobs housing balance, which may reduce vehicle trips and miles traveled.

3. Loss/Preservation of Open Space

Indicator OS.1:	**Open Space Preservation**
Definition:	Percent of Study Area Dedicated to Open Space/Agricultural Land
Calculation:	$\sum \text{Area}_{open} / \sum \text{Area}_{all}$
Variable Definitions:	Area_{open} = Acres of open space in study area. Area_{all} = Total acres in study area.

Data Source:	Existing land use data from local jurisdiction.
Geographic Scale:	Opportunity Zone/Jurisdiction
Data Collection Method:	Phone survey/data from local jurisdiction
Analysis Reveals:	How much open space is maintained as a portion of the study area over time.

Indicator OS.2:	**Urbanization of Land**
Definition:	The total acres and percent of total land conversion of agricultural or open space land to urbanized land.
Formula:	Acres Lost: $\sum$ Developed $acres_{b+1} - \sum$ Developed $acres_{b}$ Percent Change: ($\sum$Developed $Acres_{b+1} / \sum$Developed $Acres_{b}$ * 100) – 100
Variables:	$\sum$ Developed $acres_{b+1}$ = Sum of developed acres for the base year plus one $\sum$ Developed $Acres_{b+1}$ = Sum of developed acres for the base year
Data Source:	Farmland Mapping and Monitoring Program
Geographic Scale:	Jurisdiction/County
Data Collection Method:	GIS Data available on Website (updated every two years.)
Analysis Reveals:	Shows the loss of open space over a number of years.